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numbers
omitted
this year
a measure
of economy*

The Past Decade in Canadian Banking

By R. D. LITTLE

Canadian Bank of Commerce, Hamilton

(Before Hamilton Chapter, April 12, 1933)

I REALLY don't know why I should occupy this important position here to-night when among your members there are so many able men. The only reason I can ascribe for it is that when Mr. Smith has nothing to do—which isn't often—he wanders around to my office and he so frequently, I suppose, finds my desk clear that he said to himself—"Little has lots of time to write speeches—so here goes"—and here I am.

It is most kind of Mr. Smith to put me at my ease through his very pleasant way of introducing me and I am glad to hear the words of praise for the bankers which I know are from the bottom of his heart. He might have told the following story of the banker which I heard some time ago—

Two old friends met in a small town in the States and after exchanging the various items of news one said to the other—"By the way Ed, I hear your brother Joe is getting on wonderfully and is now President of the Oshkosh National Bank." "Yes," says Ed, "but say when you reach our home town don't tell his mother—she thinks he plays the piano at our boarding house?"

I feel highly honoured gentlemen at being requested to address this meeting—your interests and ours are very closely allied. I know that for our part we put a good deal of confidence in Cost Accountants and Industrial Engineers. We think their methods are essential to the success of business and more and more are we encouraging and urging our clients to make use of their services and we think it pays well.

Now I have not come to-night to discuss the depression or suggestions for the way out—but simply to show you what has happened in Canadian Banking during the past 10 years.

Nearly 450 years ago a sailor secured the use of three small vessels, the decks of which were hardly longer than this room. He was thoroughly convinced that far across the ocean there was further land to be discovered. He set off from a small port in Spain and after tossing about on the ocean for about two and a half months, during which time much discouragement was faced and revolutions from his crews, land was sighted. Columbus had laid the way to the discovery of the American continent.

What followed Columbus? The steamships which now cross the ocean in 5 days. Then what? The aeroplane—which linked the European and American continents in 24 hours—. Some of you doubtless sat in your homes on Christmas day and listened through the medium of your radio to the messages from Australia, New Zealand and other far off places.

The world has become small and with it the interests of the various nations through the development of international trade and

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international finance have become almost completely bound up in one another.

More and more it is becoming apparent that the world is just one large body—very similar to the human body—it consists of various members—each one of which can be assailed with various kinds of diseases from time to time—the extent of which depends very largely upon the abuse the member has been put to. Some members of the body are weak because of under-development—and others because of over-development become so strong that in their confidence they run to extremes which invariably ends in disaster.

The Great War left the world in a weakened condition but as the disease was a complex one disagreements have arisen between the Doctors—and the case is still being diagnosed—the patient meanwhile remains very sick. One thing is becoming clear—slowly but surely it is being realized that one country's loss is not another country's gain.

Let us suppose that in the dead of a dark night I roused Mr. Smith from his bed and invited him to come with me for an aeroplane ride. Being of a sporting disposition he agrees and we set off and just as day breaks I set him down in the middle of a huge wood and invite him to find his way home. He is going to have very great difficulty—if he ever gets home at all—because he does not know where he is and if I were to simply tell you the position in which the Canadian banks find themselves to-day you would be like Mr. Smith. I thought therefore I would take you over the road the Banks have travelled during the past ten years so that the position to-day would be made quite clear.

Bank's Resources

Let me run over briefly the principal items of the Bank's balance sheet.

On one hand we have the Bank's resources consisting of its capital and surplus—deposits—amount of notes in circulation—and as an additional source of funds in times of need and at peak periods the rediscounting privileges under the Finance Act forms a further avenue for banking funds.

Capital and Surplus

I need not enlarge on the capital and surplus of the Banks. This is something that is quite clear to you. Nor need I explain what deposits are because I know you all keep very substantial ones with your banker at all times. Perhaps, however, I might tell you something more about the circulation privileges the banks enjoy.

As soon as a bank receives its charter and is authorized by the Government to do business it has the privilege of issuing its own notes in multiples of \$5 and in denominations of not smaller than \$5 to the extent of its unimpaired Paid Up Capital. During the crop moving season from 1st September to the last day of February it can increase the amount of its circulation by 15% of its combined Capital and Reserve. On this excess amount an interest rate not exceeding 5% is paid to the Federal Government. This goes into the Consolidated Revenue Fund. The banks can even go further than this and issue circulation to any extent provided that for all amounts issued in excess of the aforementioned limits gold is deposited in the Central Gold Reserve. When I say gold I might add that in many cases it really is not actual gold. Dominion Government notes are considered to be the equivalent of gold and for this reason very frequently the Banks deposit Dominion Government notes rather than the coin itself. So much then for the circulation privileges of the banks.

The banks have a further avenue from which they can extend their

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operations if they desire and that is by making use of the rediscounting privileges under the Finance Act. That is to say the Banks can go to the Minister of Finance and borrow from him by pledging securities. The amount that the Minister will advance depends on the class of security deposited. Usually Dominion Government bonds are used for this purpose in which event the Minister advances up to 95% of the value. It must be understood that this particular privilege is only availed of at peak periods as it is not considered wise to use this safety gap too frequently. During the period we have been reviewing borrowing rose from \$31,000,000 at the close of 1923, to \$111,000,000 in 1929, dropped to \$12,000,000 in 1930 and rose again to \$42,000,000 in February, 1933.

Use of the Resources

What becomes of its resources? How does the Bank use them?

First— In its loans which comprise the greater proportion—these very according to the activity of business.

Secondly— Securities.

Thirdly— Its cash reserves.

Fourthly— A moderate investment in bank premises.

Naturally a Bank's lending power depends very largely on its deposits. What then has been the trend of the deposits during the past ten years?

I have here a chart which will demonstrate this to you very clearly. Starting at the low point of \$2,122,000,000 in December, 1923 we see an uninterrupted expansion until the fall of 1929—a record peak of \$2,792,000,000 having then been reached. With the break in the stock exchange prices a precipitate fall set in which has continued until the present time—in fact they almost reached the starting point of December, 1923—I believe that if it were not for the Canadian Exchange situation it is quite likely that the 1923 point would have been equalled. Translating it into figures we find that—

In six years deposits increased \$607,000,000.

In three and a half years they decreased \$597,000,000.

Circulation of notes dropped in the same period by \$70,000,000.

In all then—the Banks lost \$667,000,000.

Period of Liquidation

How have the Banks met this huge drop in resources? The answer is found very simply. Another chart will soon show you. Unprecedented movement has taken place in the Bank's loans. Starting in 1925—the period when banks were building up their resources—an unbroken expansion took place until the fall of 1929 when everyone ran for cover—and the wisest ones liquidated while the opportunity existed. Since that time following the many disappointments that have occurred in the public's hopes for a revival of trade further liquidation has taken place. In fact, it has gone much farther than anyone dreamed of. Not only did it include security loans but due to lack of demand for merchandise and the fact that manufacturers in 1929 carried large stocks the liquidation of this has been long drawn out and brought much grief in its wake. In all—

Loans have decreased by \$876,000,000.

From a peak of \$2,228,000,000 to \$1,412,000,000.

Of this amount \$385,000,000 was in call loans and the balance comprises general liquidation which has come from manufacturers, retailers, farmers and many others.

So far has this liquidation of loans proceeded that the Banks have found difficulty in profitably re-employing the funds they received in excess of the deposits they lost. An examination of their invest-

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ment holdings will show to what extent they had to turn their money into these channels: From security holdings of \$48,000,000 in 1929 they have expanded by \$350,000,000. While from a safety standpoint this might be satisfactory—from a practical banking view it is quite undesirable. Investments do not yield sufficient to make it profitable to banks to invest such large sums in this way.

You can deduce from these figures the reason there is talk of paying lower interest rates on deposits.

Liquidation About Completed

If these figures mean anything at all—and I believe they do—then it seems to be a reasonable conclusion that liquidation of loans must be very close to the end. The point has been reached where liquidation is only desired in cases where funds are in jeopardy and can be saved. Undoubtedly there is still some of this to go through the mill—but the bottom seems to be decidedly near and as far as the Banks are concerned the decks are clear for a revival in business.

We still have some federal and municipal financing to be completed. Budgets are not balanced, taxes in many municipalities are running into arrears. There is every evidence, however, that the situation has been taken hold of firmly and it is my belief that in the reasonably near future this situation will be for the most part straightened out.

Unfortunately our fate is not entirely in our own hands. We depend to such a large extent on other countries because we sell them the bulk of our prime commodities. We have three items of export which stand out above all others, namely—

wheat
metals (including copper, nickel, lead, zinc, silver)
newsprint

We must have outside markets for these commodities.

World Economic Conference

The revival of the buying power of the rest of the world is, therefore, essential and we cannot help but look forward to the coming World Economic Conference which we hope will lead to a better understanding in regard to trade relations and that with the Conference on War Debts such adjustments will be made as to enable the nations of the world to turn their resources into new production, and not employ their gold reserves for paying debts.

Perhaps a revaluation of gold is necessary first—I don't know—Frankly I can't see it yet—perhaps I am too conservative to accept such a revolutionary theory—but it may come. If it does, I can't see but what in time we shall again be back where we started.

It is clear that great developments are under way. President Roosevelt is digging deeply into the difficulties of his country and is accomplishing things. We have reason to believe that tangible results will follow. Premier Ramsay MacDonald of Great Britain is likewise striving for a better understanding between nations and provided that the militaristic element of Europe does not get control of affairs I—for one—am optimistic enough to believe that we shall shortly sight land—following which the "Wheels of Industry" will be turning again.

Something About Statistics

BY R. H. COATS
Dominion Statistician

(Before Toronto Chapter, April 21, 1933)

LET me approach my subject broadly—with a definition. Statistics is only another word for information—information expressed in numerical or quantitative form. Every art, every science, every business requires statistics. More particularly, every government requires statistics—first, for its own use, secondly for the use of its people. The great Belgian Statistician, Quetelet, once collected 184 distinct definitions of statistics. That was in 1869, and there have been fully as many since, because every writer of a book on statistics makes it a point of honour to begin with a brand new definition of his own. Far be it from me to drag you into that bog, however stimulating it might be as mental discipline. As a matter of fact the “wherefore” of statistics is fairly simple. It is this: whilst we can reason in the abstract about a great many human problems and activities we must also collect and study the facts about life in order to turn back and test our general principles. In the social and economic sciences—the sciences by which the government runs the country—we can not experiment as we can in the natural sciences. We can only observe, count and analyse the doings, behaviour and characteristics of mankind from day to day. These observations, countings and analysings are statistics. Hence their enormous importance for every man, woman and child in the community. They are the facts which literally define and determine the conditions of our existence. It was Goethe who said: “Statistics govern the world”.

Let me retract and add just one definition that seems to me excellent. “That which everywhere oppresses the practical man” says Merz in his *History of European Thought in the Nineteenth Century*, “is the great number of things and events which pass ceaselessly before him and the flow of which he cannot arrest. What he requires is the grasp of large numbers. Thus has arisen the science of large numbers, or statistics, and the many methods of which it is possessed”. Statistics is the “quantitative observation of aggregates”.

Statistics in Canada

I musn't attempt the history of statistics in Canada. The modern phase begins with an Act passed in 1848 and culminates in the Act under which the Dominion Bureau of Statistics was created in 1918. There were scores of acts in between. The present legislation, however, is new and unique in that it typifies the resolve to organize, for the first time, the statistics of Canada comprehensively and under one direction. Up to a few years ago the statistics of Canada were carried out in a large number of Departments, Dominion and Provincial, all over the shop, each working independently. The results were good in spots, but only in spots, and they were chaotic as a whole. The purpose of the Dominion Bureau of Statistics was to correct this chaotic condition, levelling up inequalities, filling up the gaps—in brief, planning and executing a unified and comprehensive scheme of national statistics.

Now what is the problem of organizing a national statistical Bureau like ours? In the first place, it simply amounts to ensuring that the various subjects of chief concern to the people are properly

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illuminated by the necessary basic data. It would take me the better part of this evening merely to catalogue what these subjects are. I will touch only the very high spots: There is, first the great subject of population or demography, the people themselves—their births and deaths, which is vital statistics; their comings and goings, which is migration statistics; their various characteristics of sex, age, occupation, etc., which is the census. The taking of the census has been called the largest single peace-time operation carried out by the government. That perhaps was before the C.N.R. However, we had over 15,000 people on the job two years ago, which is three times as big an army as Wolfe had when he took Quebec. We had later over 800 clerks compiling the results, and it takes 3 years before they are finished. Next is the great field of social statistics—great subjects like criminology, education, and so on. Thence we glide into the economic subjects; first of all, production in all its forms—agriculture, the fisheries, forestry, mining, manufacturing—these in turn divided into literally hundreds of subsections. From production it is but a step to distribution, trade in all its aspects, transportation, marketing, the great subject of prices and the laws which govern prices. A further step leads to finance—Dominion, provincial and municipal accounting, currency, banking and the like. Crisscrossing many of these subjects are subjects like capital, labour, power, consumption. Not to go any further, we have fourteen branches in the Dominion Bureau of Statistics, each of which has several sections, with a total of 57 distinct subsections. Yes, we exactly duplicate the pickle advertisement. We issue on an average $2\frac{1}{2}$ publications a day and answer anything from 75 to 175 enquiries daily from the public, ranging on topics from the sublime to the ridiculous.

Problem of Co-ordination

But the great problem of national statistics is not merely to ensure that these subjects get covered. I am sorry to say they don't always get covered satisfactorily. I would hate to confess to the subjects of which we are somewhat ignorant in Canada. But the big problem of statistics is the problem of co-ordination or of ensuring that these different statistics fit into each other and make a single comprehensive whole. You see the State is something more than the sum of a lot of heterogeneous activities. It is a single entity. It is like the human body. We have hands and feet, some of us have a heart and some of us a liver. In a way these perform distinct functions, yet each of us is a single going concern nevertheless. If we have a headache we don't amputate the head. So in the State we have trade, finance and the like, but these are inter-related in the closest way. We may have a business depression, the cause of which may lie in any one of a dozen different fields, like the headache aforesaid, which may be referred to a dozen different indiscretions. Now the point is this: If you are going to be able to trace cause and effect in this way from economic field to field, your statistics must be prepared accordingly. This is a technical matter, but take a simple example: Suppose you follow one principle of classifying commodities in your production statistics and another principle in your trade statistics and still another in your price statistics—well, you can see where that lands you. "There are sixty different ways of constructing tribal lays," said Rudyard Kipling, "and every blessed one of them is good." So with classification systems, only most existing ones are bad. Again, suppose your mining statistician defines capital in one way and your forestry statistician in another, and so on (and capital is a very elusive concept), you can easily see that you can

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never get a general purview of capital. So with labour. There are innumerable points like this. There is the immense and profound field of mathematical technique which ought to be uniform. Thus your national statistics, diversified as they are, running the whole gamut of human activities, must be conceived at bottom as a unit.

Constitutional Difficulty

But even when you have planned and set down on paper a fairly comprehensive and what we statisticians call an "articulated" scheme of national statistics—a most difficult thing to do—you are not at the end of your troubles. In fact you are at the beginning. What confronts you then is nothing less than a constitutional difficulty, forsooth. It will be apparent, that your statistical system must be under single direction,—otherwise how can it be unified. At the same time a certain amount of statistics must originate in different Government branches or departments. For instance, the foreign trade statistics originate in Customs returns. Now, when a government department produces statistics, it feels that it owns them body and bones. Yet clearly if you admit this, you would have to say goodbye to statistical coordination. Well, we have tried to solve the difficulty simply and well in Canada. The Dominion Statistician, as head of the Bureau of Statistics, has by Order in Council, first, the right of direct conference with other Departments on things statistical. Second, he has the further right at the end of such conference, of reporting a detailed plan of procedure to the Cabinet. If any dispute arises, the Cabinet decides in the interests of Statistical policy as well as of Departmental point of view.

This, as I say, is a simple and common-sense piece of machinery, but you may be surprised to hear that control of this kind is regarded as impossible in many countries. Common-sense is verily one of the rare virtues. It may interest you to know that some years ago a statistical conference of the British Empire at which I had the honour of representing Canada, sat for about three months in London for the purpose of laying down a scheme of co-ordination between the different Dominions within the Empire. We got down a very good scheme on paper, but little has been done, largely because some of the big Government Departments—I won't say where—but they weren't in Canada—could not possibly "submit to dictation". Again, some time later I served on a Commission of ten which the League of Nations appointed to give them a plan for international statistics. In international statistics as in national, there are a number of what we might call departments. The International Institute of Agriculture at Rome, the International Commercial Bureau at Brussels and the International Labour Office at Geneva have been dealing extensively in statistics. Now there is the most urgent need that these different bodies should work in unison. Yet our Commission, which consisted in part of representatives of these bodies, differed to such a degree that three members brought in a Minority Report, and so in the International Field little or nothing has been done. I think we can claim without immodesty that Canada's general statistical policy is advanced and intelligent beyond many, perhaps most, other countries.

An Illustration

Now I should like very much to describe to you just how we work in a particular field in the Bureau, though I realize I must not go too much into detail. But let us take a sample section—a mild one—a milk and water one. Take the dairying industry. As you know, dairy production in Canada is under the immediate supervision of the

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provincial governments; each government has a dairy commissioner. There is also a Dominion dairy commissioner whose function relates more particularly to inter-provincial and external trade. Originally, the nine provincial dairy branches collected and issued statistics each independently. They did it in every which way—different classifications of products, different fiscal years, etc. Thus if you wanted a comparison of one province with another or a Dominion total, the work had to be done over. Subjects in which a dairy commissioner as such is not directly interested, for example capital, labour, fuel consumption, power equipment, were almost wholly omitted. You couldn't compare dairying as a whole with say, mining, from a broad economic standpoint, because the figures had a different meaning.

Under the present scheme, by which the Bureau of Statistics is the organizing head of statistical enquiries, the Dominion and Provincial dairy commissioner's and the Bureau have joined forces. A common form has been agreed upon covering the points that anyone needs to know. The Bureau usually prints and supplies this form, thus ensuring standardization. The duty of collection is assumed by the provincial departments. When the forms are collected and vised they are tied up and sent to the Bureau for compilation—because we have \$150,000 worth of compiling machinery. Results are at once handed back to the provinces for use in any way which they may see fit. The Bureau, however, undertakes to publish a report for the whole of Canada, which report is edited by the Dominion dairy commissioner. Thus, we unite on this subject all the official brains, such as they are, throughout Canada—we entirely eliminate duplication, and we ensure homogeneity of methods and results. We all tell the same story,—if it is right, good; if it is wrong, good again;—we all tell the same lie, which is a great comfort to a statistician. Further, we effect a general pooling and organization of all information in existence on the dairying industry. If you ask any question as to the production, trade, capital, or any other economic aspect of the dairying industry, the Bureau can tell you on its own authority and that of the several dairy branches by return mail. If you ask any technical question such as about how to colour butter, how to cure cheese, whether the Ayrshire or the Jersey is the best dairy cow, and so on, the Bureau can tell you just what department knows best and can direct you to it. Now I call that good organization,—good for the government, good for the business man who is pestered with forms and questionnaires and good for the general public always thirsting for information that is easy to come by and whom we should help in every possible way. The work, as I said, with 57 departments in this way—mining, forestry, manufactures, and so on. Incidentally we maintain a library in the Bureau in which we try to keep up to date the more important statistics of the leading countries of the world. In a word, if you are in need at any time of an economic fact relating to Canada; either (1) the Bureau has it and can give it to you instantaneously; or (2) it is not in existence and we know that it is not in existence, and there's an end o't; further under this second heading, we know why it is not in existence and just how it can be brought into existence.

Special Inquiries

Now I am often asked when discussing statistics in general in this way to come down to cases and tell what they do for a particular business. Well, I only know that we answered 15,000 or 20,000 enquiries from business men last year, and I presume they wanted the information for a usual purpose. Not long ago a prominent Canadian manufacturer, looking over one of our trade publications observed that

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there were considerable imports into Canada of a certain article which he thought he could manufacture. He made some enquiries, the final result of which was that he installed an \$8,000 machine to manufacture the article in question, for which when he wrote he had orders booked for ten months in advance. But usually we don't get letters of that kind.

But let me describe another instance. A large manufacturer once told me that a two-months statistical investigation into all the circumstances surrounding a certain popular line he was selling which was yielding him no profits showed him, first, a leakage in costs which had been going on unperceived for many years, and, secondly, that freight rates to distant distributing centres was eating up the rest. A switching of advertising to near-by territory followed with the results that the line speedily became profitable.

But let me get on broader ground. I suppose that we are all first and foremost human beings, even before we are business men, and as such are interested in our own health and longevity. Do you know that in England and in America the general death rate has been nearly cut in two in the past hundred years? In the United States, the expectation of life at birth has increased eight years since the beginning of the present century. Right here in Montreal the rate of infant mortality has been reduced from one in every 4 babies in 1910 to one in every 8 last year. Now it was statistics that pointed the way to this achievement. Statistics are like the captive balloon or the aeroplane that the army sends up to observe the movements of the enemy. The balloon telegraphs back its information to the artillery who straightway know exactly where to train their guns. All the big guns in the world are useless if you don't know where to point them. It was statistics that marked the target for medical science in the long fight against tuberculosis. It is at this moment marking the target in the fight which is going on the world over against cancer. I have on my desk at Ottawa some very interesting suggestions from the League of Nations as to how we should collect our data regarding deaths from cancer, in order that medical science the world over may know how to proceed to the conquest of that fell disease. It is exactly the same all along the line. Only by research and knowledge, only by knowing where to point your guns, is progress possible—if there is such a thing as progress; I believe a certain school of philosophers deny it.

The Census

It is so with the Census. The Census is part and parcel of the common everyday speech and of the common everyday thinking of the people. Everyone of us uses the Census every day in our lives. This is because the Census presents the broad human background against which all our other facts are reflected. Man is, of course, a living soul; he is also a money-earner. Dr. Dublin, an eminent American statistician has estimated that a male human being able to earn \$2500 a year at the height of his power is at birth worth \$9000 and at 25 over \$30,000. The female of the species is more deadly than the male, but according to Dr. Dublin she is "worth" only half as much. Now if you work out the entire population on this basis, an astonishing result is obtained. In Canada though our tangible national wealth is about \$30 billions, the economic value of the Canadian people themselves is no less than \$160 billions. No wonder we need a Census. No wonder Ruskin has said "There is no wealth but life". That is why unemployment is such a terrible thing and why it is almost no less terrible that in the last decade in Canada we had 1½ million people

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we couldn't absorb—didn't know what to do with. And so I repeat we require the Census every day of our lives. We may use it unconsciously but we use it. A good many of us in this respect are like M. Jourdain in Moliere's play, who had not heard of prose, and was astonished to find he had been talking prose all his life. In Turkey so important do they consider the Census that on the day it is taken every shop, every factory, every place of business is closed, the railways cease to run, and the people are forbidden to leave their homes between 9 in the morning and 6 in the evening while the Census enumerator is going his rounds. Speaking, of course, strictly as a statistician I could wish to be a Turk!

But as a matter of fact, it is the abuse of statistics rather than their use and citation that I like to talk about in public. You are familiar with the pleasantry that one can prove anything with statistics. But a statistic is a fact exactly like every other fact, true only within the limits of its definition. If you misunderstand the definition, it is rather rough to blame the statistics, except on the sporting principle, when wrong pitch into the other fellow. Of course, it is easy to make mistakes. "The study of statistics", says Sir Josiah Stamp, who is undoubtedly one of the greatest of living statisticians "requires a warm heart, a brain as clear as an icicle and as fair as the multiplication table". These are high qualities, and I admit that we official statisticians possess them, but what is the use if we cannot count on you people outside

And now I have only two more points to mention.

Prophecy

The first has to do with the tremendous subject of prophecy. I said something a few moments ago about the essential unity in diversity of economic phenomena. Out of this grows the possibility that we may be able to foresee the trend of economic events. Under normal conditions there are certain statistics or combinations of statistics that act as signals. Just as the weather man is able to tell from day to day whether we shall have rain or shine, so should the statistician, if his range of data and ability to interpret are sufficient, (two big "ifs") be able to predict what is going to happen in the economic weather. This sounds audacious, in view of the terrible "cropper" taken by most economists and statisticians engaged in the business of prophesying a couple of years ago. But it remains the case that the business man who does not determine his policies to at least some extent by general conditions is like a ship that drifts away from the main battle fleet; he is apt to get pounced upon. Now, one of our pet publications is a monthly bulletin ("The Monthly Review of Business Statistics", price one dollar a year) specifically designed to enable business people to follow these general conditions up to the minute and gauge them as scientifically as possible. Business forecasting, I agree with Professor Steven Leacock, rather resembles a pick axe for the removal of a mountain. The fakir, too, is abroad in the land. But some good work has been done on the order in which economic events follow each other. But the point is that the mantle of prophecy has definitely fallen upon the statistician. Whether he wants to or not he must wear it, for the business man can no more avoid forecasting than he can avoid breathing. Some day a future Dominion Statistician will be giving you a talk, if you survive the present one, on "How to be a Prophet", or "Wheels within Wheels", or the "Modern Jeremiah". Then if you want to lose your money on futures you may have the fun of doing so in accordance with a perfect system.

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The Questionnaire Nuisance

My second point has to do with this questionnaire nuisance. What are we going to do about it. I appreciate as fully as you do the irksomeness of it. But can Canada "go it blind" in all the multifarious problems social and economic she has to deal with—more particularly the problems that have arisen since the great war—still more since the great depression. No one will say so. I get every week a certain number of letters, sometimes more sometimes less, always some—that we describe as "curses". They fall under two heads—those which curse us for collecting information, and those which curse us for not having it. We are damned if we do and we are damned if we don't. The significant point is this: that the latter on the whole outnumber the former—certainly in quality. What then must be my word to you? It is two-fold: Help us to complete that large interdepartmental, intergovernmental organization problem, which I have sketched to you and in which alone lies the possibility of abating the questionnaire nuisance. Secondly: and this is Scotch, try to get something back from us in payment of the nuisance. Certain sections of business and certain individuals are doing so to the utmost. Organizations like the Pulp and Paper Makers Association the Boot and Shoe Makers Association, the Rubber Makers Association, for instance, have actually suggested additions to our questionnaire and have volunteered to circularize its members for us when the latter are slow in sending in. Let me inform you that there is a perfect gold mine of information at your disposal in Ottawa.

But it is time that I should make an end. The final concept in the organization of a national statistical system is that of a great national laboratory for social, economic and business research. The endowment of the National Bureau of Economic Research in the United States is suggestive in this connection. In Germany the central statistical department has been for many years one of the most powerful instruments of the Governments, its organization permeating the country and embracing 17 subsidiary bureaux and 45 municipal offices. Italy reorganized her statistics in 1916 as a war measure, and has since greatly enlarged them. In the reconstruction of other states, statistics have similarly occupied a foremost place. Czecho-Slovakia has set up a Bureau the leading feature of which is an annual congress on statistics of over 60 representatives. It is significant that the United States, while reducing the national budget last decade by hundreds of millions, increased most of its items on statistics; of course, lately everything has been going by the board; Japan has expanded statistically at a very significant rate. Our own Bureau, I am happy to say, has attracted not unfavourable comment. Though its usefulness is only beginning, I think we may say that we have laid the foundations for a service of the first rank, comparable under constructive development with that of any other country and in its basic organization superior to most.

In general, gentlemen, it would not be seemly that one in my position should conclude with a mere boast. Yet I think that of all the professions we statisticians are going ahead at a relatively greater speed in the immediate future than almost any other. The war, as I said, was responsible for the most rapid development that has yet taken place in the history of statistics. It was a British High Commissioner to the United States who, when asked the question that used to be so common as to who won the war, actually replied that statistics won the war and he was merely repeating a saying of Marshall Foch himself. The present depression is again having the same effect; never have the demands been so great as in the past two years. Grover

SOMETHING ABOUT STATISTICS

Cleveland once said that the delightful thing about being president of the United States was that there was ten times more work than any one man could possibly do. The statistician can taste the same joy. The world is becoming so much smaller—so much more difficult to live in that it is a question of the statistician to the rescue everywhere. We statisticians are going to reap a noble revenge for the all the gibes of the past. You remember the old joke about the three kinds of lies: "Lies, damned lies, statistics". Have you noticed that the modern joke is much more respectful to the cloth? The saying now is that "Figures cannot lie, but liars can figure". The liars, you see, are now outside the profession. This is very hopeful, and on that note I shall end.

Examination Papers, 1933

The Canadian Society of Cost Accountants and Industrial Engineers

1st YEAR—BOOKKEEPING

Question 1.

1. State briefly your understanding of the following terms:—
 - a. Imprest Petty Cash System.
 - b. Current Assets.
 - c. Book of Original Entry.
 - d. Goodwill.Give examples of (b) and (c).
2. Under what classification would you place the following items in a Balance Sheet, stating briefly your reasons therefore:—
 - a. Prepaid Insurance.
 - b. Solicitors' Fees re Incorporation of Company.
 - c. Wages due but not paid.
 - d. Interest on Bonds for three months. The interest is payable semi-annually, the next payment falling due three months hence.

Question 2.

What is meant by "control accounts?" State their advantages and disadvantages, if any. Draft a form of cash book to illustrate the ruling necessary when control accounts are used.

Question 3.

- a. What is meant by a bank reconciliation?
- b. Prepare a bank reconciliation of "A" Company as at October 31, 1932, for the following information:—
 1. Balance as per bank statement, \$1,569.29.
 2. Cheques issued up to October 31, 1932, but not yet presented for payment:—

| | |
|-----------------|----------|
| J. Henry, | \$569.25 |
| H. Jones, | 129.32 |
| L. Smith, | 842.91 |
 - "A" Company 191.42 being reimbursement for amounts previously paid out of Petty Cash.

COST AND MANAGEMENT

3. Cheques issued up to October 31, 1932 which have been certified by the bank but not yet deposited by the holders:—
Minister of National Revenue,\$ 81.42
Customs Department, 142.05
4. Deposits appearing in Cash Book under the following dates not deposited in the bank until November 1, 1932:—
October 30, 1932, \$529.32
October 31, 1932 416.91
5. In November, the cheque of H. Jones for 129.32 shown above is charged to the Company as \$129.52. What effect will this error of .20c. have on the reconciliation?
6. The bank has charged .60c. as exchange on customers' cheques deposited, which exchange has not yet been entered in the cash book.

Question 4.

A manufacturing company operates a number of motor trucks for delivery purposes.

Prepare journal entries to properly record the following transactions on the company's books:—

- a. Purchased from Geo. Hall a second hand truck for \$800.00.
- b. Spent \$100.00 cash, at time of purchase, for overhauling and repairing the above truck.
- c. Purchased from A.B.C. Motors a new truck for \$1,500.00 and paid for this by forwarding to them some of the company's own finished product which cost \$1,000.00 and whose selling value is \$1,250.00 and paid the balance in cash.
- d. Purchased from Smith Motors for \$1,000.00 a new truck costing \$1,600.00 receiving an allowance of \$600.00 for an old truck. The old truck was purchased two years ago at a cost of \$1,800.00 and there is a provision on the books for two years' depreciation thereon at 25% per annum on cost.

Question 5.

- a. The A. B. Smith Company Limited paid for the year 1932 in February, 1932, an assessment from the Workmen's Compensation Board, amounting to \$3,300.00, based on an estimated payroll of \$132,000.00.

The Company's fiscal year ends 31st May. The Wages paid during the five months ending on that date amount to \$38,800.00; the accruals were \$6,600 at 31st December, 1931 and \$7,800 at 31st May, 1932.

Ascertain and give journal entry setting up the prepaid portion of the assessment at 31st May, 1932.

- b. What is the best method of treating freight and duty on purchases? What does the balance remaining in the freight and duty account at the end of a month represent
 - a. if it is a debit?
 - b. if it is a credit?

SOMETHING ABOUT STATISTICS

Question 6.

The Trial Balance of A.B.C. Company Limited as at 30th November, 1930, is as follows:

| | | | |
|---|-----------|--|--------|
| Accounts Receivable | \$ 75,000 | Repairs to Plant and Machinery | 5,000 |
| Bank Account | 20,500 | Travelling Expenses | 5,000 |
| Bank Exchange | 500 | Travellers' Salaries | 35,000 |
| Building | 75,000 | Workmen's Compensation Insurance | 500 |
| Cash (Petty) | 500 | | |
| Cash Discounts allowed | 7,500 | | |
| Duty and Freight | 13,500 | | |
| Factory Expenses | 6,000 | | |
| Interest on Bank Loan | 4,500 | | |
| Inventories (as at 1st December, 1929)— | | | |
| Raw Materials | 50,000 | | |
| Goods in Process | 20,000 | | |
| Finished Goods | 80,000 | | |
| Insurance (Fire) | 900 | | |
| Light, Heat and Power | 3,000 | | |
| Land | 10,000 | | |
| Material Purchases | 450,000 | | |
| Mortgage Interest | 1,800 | | |
| Non-Productive Wages | 15,000 | | |
| Office Furniture | 3,000 | | |
| Office and Management Salaries | 30,000 | | |
| Office Expenses | 8,000 | | |
| Plant and Machinery | 225,000 | | |
| Productive Wages | 95,000 | | |

\$1,240,200

| | |
|----------------------------------|-----------|
| Accounts Payable | \$ 50,000 |
| Bank Loan | 75,000 |
| Bad Debt Reserve | 4,000 |
| Cash Discount on Purchases | 6,000 |
| Capital Stock | 200,000 |
| Mortgage Payable | 40,000 |

(Due 31st August, 1932, 6% interest payable half-yearly on 28th February and 31st August.)

| | |
|------------------------------|---------|
| Reserve for Depreciation— | |
| On Building | 4,300 |
| On Plant and Machinery | 45,000 |
| On Office Furniture | 600 |
| Sales | 750,000 |
| Surplus Account | 65,300 |

\$1,240,200

Inventories as at 30th November, 1930, are: Raw Materials \$90,000, Goods in Process \$20,000, Finished Goods \$60,000. Accrued Charges are: Productive Wages \$2,500, Office Salaries \$500, Power Bill \$300, and Factory Expense \$200, together with Mortgage Interest accrued.

Insurance Premiums of \$200 were prepaid.

Provide for the following: Additional Reserve for Bad Debts \$2,500; Depreciation for the year on Buildings at 2½%; Plant and Machinery at 10%, and Office Furniture at 10%, and set aside 10% of the year's profits to go to General Reserve.

From the above information prepare Manufacturing, Trading and Profit and Loss Accounts and Balance Sheet.

COST AND MANAGEMENT

1st YEAR—ACCOUNTING (Partnership, Manufacturing and Elementary Company accounts)

1

An incorporated company, registered under the Dominion Companies Act, is authorized to issue 200,000 common shares of no par value and 50,000 6% Preferred Shares of \$100 each.

At Dec. 31st, 1932, it has issued (a) 100,000 common shares at consideration of \$5 each, all of which is fully paid: and (b) 30,000 preferred shares, on which \$75 has been called up: all of the calls have been fully paid, with the exception of \$25 per share on 30 shares for a call made on Dec. 1st, 1932. How would you set the above in the Balance Sheet?

2

In apportioning expenses over departments in a large retail store, on what bases would you allocate the following:—

Bad Debts,
Rent of Buildings,
Depreciation of Equipment,
Fire Insurance on Merchandise in Selling Depts.,
General Administrative Expenses.

3

The following was the Trial Balance for the six months' period ended 31st December, 1932, of S. Norton & B. Wilson, who were carrying on business in partnership as manufacturers and traders:—

| | | |
|---|---------|---------|
| Cash in hand | \$ 100 | |
| Cash in Bank of Montreal | 27,000 | |
| Trade Debtors | 238,000 | |
| Raw Materials: Inventory at 1st July, 1932 | 48,000 | |
| Raw Materials: Purchases | 160,000 | |
| Raw Materials: Returns Outwards | | 2,500 |
| Work-in-Process: Inventory at 1st July, 1932 | 11,000 | |
| Finished Goods: Inventory at 1st July, 1932 | 24,000 | |
| Sales: Cash | | 1,500 |
| Sales: Credit | | 550,000 |
| Returns Inwards: Sales | 3,000 | |
| Inward Freight on Raw Materials | 1,500 | |
| Duty on Raw Materials | 1,000 | |
| Outward Freight on Goods Sold | 2,000 | |
| Machinery (Cost) | 60,000 | |
| Reserve for Depreciation of Machinery | | 10,000 |
| Factory Buildings (Cost) | 42,000 | |
| Reserve for Depreciation of Factory Buildings | | 8,000 |
| Land | 25,000 | |
| Factory Wages: Direct Labour | 62,000 | |
| Factory Wages: Indirect Labour | 25,000 | |
| General Factory Expenses | 18,000 | |
| Factory Power | 8,000 | |
| Factory Manager's Salary | 6,000 | |
| General Repairs to Factory Buildings | 1,000 | |
| Fire Insurance for Factory (6 mths. to Dec. 31, 1932) | 900 | |
| Salesmen's Salaries & Commissions | 6,000 | |
| Travellers' Salaries, etc. | 5,000 | |
| Expenses: Selling Department | 5,000 | |
| Salaries: General Administrative Office | 8,000 | |
| Expenses General Administration | 6,500 | |
| Discounts for period | 1,700 | |
| Reserve for Discounts | | 2,000 |

SOMETHING ABOUT STATISTICS

| | | |
|--|--------|---------|
| Bad Debts made during period | 1,500 | |
| Reserve for Bad Debts | | 1,000 |
| Bills Receivable | 20,000 | |
| Various Expenses paid in Advance | 300 | |
| S. Norton: Current Account | 5,000 | |
| B. Wilson: Current Account | 4,500 | |
| S. Norton: Capital | | 120,000 |
| B. Wilson: Capital | | 110,000 |
| R. O'Brien Loan at 8% | | 10,000 |
| Trade Creditors | | 7,000 |
| Bills Payable | | 4,000 |
| Accrued Expenses Suspense | | 1,000 |

\$827,000 \$827,000

- (a) The Inventories at 31st Dec. 1932 were valued as follows:—
- | | |
|-----------------------|----------|
| Raw Materials | \$39,000 |
| Work-in-Process | 15,000 |
| Finished Goods | 44,000 |
- (b) Wages had accrued but had not been brought into the books as follows:—
- | | |
|----------------|-----|
| Direct | 500 |
| Indirect | 250 |
- (c) Depreciation Reserves were to be increased for the six months by the following percentages based on the cost of the assets:—
- | | |
|-------------------------|-----------------|
| Machinery | —10% per annum. |
| Factory Buildings | —5% per annum. |
- (d) Bad Debts Reserve is to be brought into the Balance Sheet at a figure, which equals $\frac{1}{2}\%$ of the Trade Debtors.
- (e) Reserve for Discounts is to be brought into the Balance Sheet at a figure which equal 1% of the Trade Debtors.
- (f) Interest on R. O'Brien's Loan for the six months just ended has not yet been brought into the books.
- (g) The firm makes an increase in its selling prices, when it pays outward freight on goods sold.
- (h) Under the partnership agreement the following items were to be charged before finding the balance for division between the partners:—
- Salary:
- (1) S. Norton \$6,000 per annum
Charge $\frac{1}{2}$ to Factory and $\frac{1}{2}$ to General Administration
 - (2) Salary: B. Wilson, \$4,000 per annum
Charge $\frac{4}{5}$ to Selling Dept. and $\frac{1}{5}$ to General Administration
 - (3) Interest on Capital: 10% per annum
 - (4) Interest on Overdrawings: 12% per annum: B. Wilson had overdrawn his Current Account \$800 for one month.
- (j) The Balance of Profit and Loss Appropriation is divisible between the partners equally.
- The following are required of you as answers to this question:—
- (1) Journal entries required by (b), (c), (d), (f), (h) & (j) above.
 - (2) Work-in-Process Ledger Account:
S. Norton Current Account in Ledger:
 - (3) Statement of Manufacturing:

COST AND MANAGEMENT

- (4) Statement to show results of all operations from Trading to the distribution of profits between partners:
- (5) Balance Sheet at December 31st, 1932.

1st YEAR—COST ACCOUNTING

1

You have been installing a cost system for the A.B. Comapny. The Cost Accountant who will be operating the system does not understand the method by which the Cost Records are controlled by the General Accounts and asks you for a specific explanation of your method.

Give your explanation.

2

During the month of January, 1933, the Canadian Brass Corporation incurred manufacturing expense amounting to \$9,045.40 as shown by the Summary of Manufacturing Expense Orders. Labour Records show that the direct labour cost for the month was \$7,946.13 and the number of direct Labour Hours was 17,550.

- (a) What is the average distribution rate of the factory as a whole for manufacturing expense—according to

- (1) direct labour cost method of distribution
- (2) direct labour hours method of distribution.

You are given the following data in regard to the three Production departments—

| | Manufacturing Expense | Direct Labour Cost | Direct Labour Hours |
|--------------------|--------------------------|-----------------------|------------------------|
| Dept. X | \$2,875.20 | \$2,306.15 | 5,550 hrs. |
| Dept. Y | 4,432.64 | 4,400.95 | 9,000 hrs. |
| Dept. Z | 1,737.56 | 1,239.03 | 3,000 hrs. |
| TOTAL | \$9,045.40 | \$7,946.13 | 17,550 hrs. |

The Cost Sheet of Production Order No. 1,004 shows material cost of \$270.00 and direct labour cost of \$1,420.50. The number of direct labour hours on the order as shown by the Daily Labour Reports is 3080. The order was worked on in all three production departments and the labour was incurred as follows—

| | Direct Labour Cost | Direct Labour Hours |
|--------------------|--------------------|---------------------|
| Dept. X | \$670.00 | 1,520 hrs. |
| Dept. Y | 340.50 | 716 hrs. |
| Dept. Z | 410.00 | 844 hrs. |
| Total | \$1,420.50 | 3,080 hrs. |

Manufacturing Expense is distributed in each department at that department's own respective rate.

- (b) Find the Total Cost of Order No. 1004 under
 - (1) Direct Labour Cost Method of Distribution.
 - (2) Direct Labour Hours Method of Distribution.

3

The Dawson Production Co. Ltd. have been carrying on business as manufacturers of steel products.

Their Trial Balance as at April 1st, 1933 was as follows:—

| | |
|---------------------------|-------------|
| Inventories—Stores | \$ 8,476.20 |
| —Work-in-Process | 5,130.05 |
| —Finished Goods | 10,491.00 |
| Cash— | 7,432.42 |
| Accounts Receivable | 28,401.18 |

SOMETHING ABOUT STATISTICS

| | | |
|---|--------------------|--------------------|
| Delivery Trucks and Equipment | 3,850.00 | |
| Plant & Machinery | 32,910.00 | |
| Deficit Account | 1,800.73 | |
| Reserve for Deprec. of Delivery Trucks & Equipment | | \$ 1,827.38 |
| Reserve for Deprec. of Plant & Machinery | | 13,213.90 |
| Bills Payable | | 9,827.91 |
| Accrued Payroll | | 620.00 |
| Accrued Payroll | | 630.00 |
| Capital Stock | | 50,000.00 |
| | <u>\$98,491.58</u> | <u>\$98,491.58</u> |

Summary of the Transactions of the firm for the month of April is as follows:—

| | |
|---|-------------|
| 1. Material purchased and placed in Stores | \$ 5,140.29 |
| 2. Direct Material purchased and applied immediately to production | 816.08 |
| 3. Direct Material issued from Stores | 5,842.20 |
| 4. Indirect Material issued from Stores | 3,845.10 |
| 5. Sundry supplies and expenses chargeable to Manu- facturing expense, paid for in cash | 990.70 |
| 6. Scrap Material returned to Stores from production department | 182.93 |
| 7. Total Payroll for month—Direct Labour | 12,920.23 |
| —Indirect Labour | 1,904.40 |
| 8. Wages paid during month | 14,608.00 |
| 9. Accounts payable paid during month | 12,164.00 |
| 10. Selling Expenses (not including any charge for delivery) | 2,921.77 |
| 11. Administrative Expense for month | 2,680.05 |
| 12. Financial Expense for month | 1,506.30 |
| 13. Accounts Receivable collected during month | 42,900.50 |
| 14. Depreciation written off for month at following rate:— Delivery Trucks & Equipment—20% per annum Plant & Machinery —10% " " | |
| 15. Sundry Expenses of operating Delivery Trucks for month (exclusive of Depreciation), paid by cash The Total Charges against Delivery, for Operating Expenses and Depreciation were incurred in delivery of finished goods to customers | 1,097.20 |
| 16. Manufacturing Expense applied to Production | 6,250.00 |
| 17. 85% of Work-in-Process was finished and trans- ferred to Finished Goods. | |
| 18. 90% of total Finished Goods were sold at an aver- age advance of 30% on cost. | |
| 19. Customers returned goods invoiced to them at | 520.00 |

Required:—

- (a) General Ledger entries in Journal form
 necessary to record month's transactions
 (number your entries to correspond to numbers given above)
- (b) Statements to show—(1) Cost of Goods Manufactured
 (2) Cost of Goods Sold
 (3) Gross Profit
 (4) Net Profit or Loss

COST AND MANAGEMENT 1ST YEAR STATUTE LAW PARTNERSHIP

Question 1

How is a partnership created? Is a verbal agreement valid? Explain.

Question 2

What are the rules to determine existence of partnership?

Question 3

Define limited partnerships. Explain special features and difference with other classes of partnerships.

PROVINCIAL COMPANIES ACT

Question 4.

Whether companies are incorporated by letters patent or by registration, according to laws of your province, explain how different classes of shares are created. What are the best known classes of shares?

Question 5

What special book or register of members besides books of accounts, must be kept according to the act? Explain.

Question 6

Describe procedure at annual general meeting of shareholders. Write a notice of meeting, a proxy and the minutes.

DOMINION COMPANIES ACT

Question 7

Explain proceedings of organization subsequent to incorporation.

Question 8

How and by whom are auditors appointed? Is appointment of auditor compulsory? If no appointment is made at time of incorporation, what is the privilege of a shareholder to remedy the situation?

Question 9

The Canadian Building Co. Limited was incorporated in 1926. The incorporators are John Black, Pierre Leblanc and Dame Martha Brown. The latter bought the assets of her husband who was bankrupt and sells them to the new company. She receives shares in payment. Certificates are in her own name. She gives a general proxy to her husband Thomas Brown, for the administration of her affairs. At the first meeting of shareholders, Thomas Brown becomes a director and President, and is reelected annually. The dividends are paid to him. All his signatures to documents on behalf of the company fail to indicate that he is acting as proxy, but convey the idea that he is acting in his own right. He is still an undischarged bankrupt. Is there anything illegal? If in the affirmative, explain and suggest remedy.

BANKRUPTCY AND WINDING UP ACTS

Question 10

The trustee of a bankrupt estate, has completed his work and you are asked to prepare the dividend sheet in proper form, showing expenses and creditors in their proper rank according to the act. The business has been continued by the trustee. The bank's claim is secured by bonds mortgaging the entire assets of the defunct firm.

| | | |
|--|-------------|-----------|
| Receipts from sales during bankruptcy | \$10,000.00 | |
| Disbursements for same: | | |
| Purchases | \$7,000.00 | |
| Expenses | 2,000.00 | 9,000.00 |
| Receipts from sale of stock | | 40,000.00 |
| Receipts from collection of book debts | | 12,000.00 |
| Sale of real estate | | 25,000.00 |
| Subject to mortgage before bank's security ... | | 26,000.00 |

SOMETHING ABOUT STATISTICS

| | |
|---|-----------|
| Taxes paid | 1,150.00 |
| Rents collected | 760.00 |
| Repairs to buildings | 300.00 |
| Legal costs | 1,000.00 |
| Trustee's fees: 5% on realization | |
| Various costs of trustee | 500.00 |
| Wages, 3 months past due | 1,000.00 |
| Wages and commissions more than 3 months | 500.00 |
| Sale of Furniture & Fixtures | 3,000.00 |
| Sale of Plant and Machinery | 4,000.00 |
| subject to lien of | 800.00 |
| Bank's claim | 50,000.00 |
| Ordinary creditors | 90,000.00 |

Question 11

Does a Company loose its corporate status during liquidation?

INCOME TAX ACT

Question 12

Pick out items subject to income tax and deductions allowed by the act in the following list:

Receipts:

- (a) Salary; (b) Interest on savings in bank;
- (c) Profit on sale of automobile truck by a grocer;
- (d) Dividend paid by a company to another company;
- (e) Rents collected; (f) Life insurance principal;
- (g) Fire insurance on stock and fixtures burnt out;
- (h) Profit on sale of shares at a price including dividend, between declaration and payment of dividend.

Disbursements:

- (a) Adding a garage to house.
- (b) Loss on sale of real estate.
- (c) Life insurance premiums.
- (d) Fire insurance premiums.
- (e) Deficit in income from investments against salary and trading profits.

Question 13

The Quebec Mfg. Company shows the following balance sheet:

| | |
|--------------------------|-------------|
| Cash in Bank | \$50,000.00 |
| Book Debts | 5,000.00 |
| Merchandise | 10,000.00 |
| Fixed Assets (net) | 10,000.00 |
| Investments | 20,000.00 |
| | \$95,000.00 |

LIABILITIES Nil

| | |
|---------------------------------|-------------|
| Surplus undivided profits | 35,000.00 |
| Paid up Capital | 60,000.00 |
| | \$95,000.00 |

They wish to reduce their capital to \$30,000.00 by distributing the investments and \$10,000.00 in cash to shareholders. What income tax, it any, would they have to pay? Explain.

BILLS OF EXCHANGE ACT

Question 14

Define in the terms of the Act, a note, a draft, and a cheque.

Question 15

When is protest necessary?

COST AND MANAGEMENT

2ND YEAR—COST ACCOUNTING

1

- (a) Define a Budget Control System.
- (b) Give five advantages of a Budget Control System.
- (c) Give five advantages of a Budget Control System interlocked and operating in conjunction with a Cost Accounting System.

2

A banker has made a large loan to the X Manufacturing Company, and the Company is having difficulty in obtaining sufficient sales volume to keep the plant operating at more than 40% capacity. The Company which owns its Fixed Assets free and clear of any mortgage has always adopted the policy of computing interest at the rate of 6% per annum on the cost value of the Fixed Assets, and including this Interest Charge as an item of Manufacturing Overhead Expense, when computing costs. You are requested by the banker to write him a report regarding your views about this accounting procedure.

Write a brief report to the banker, giving your opinion as to the propriety of the above accounting methods which are used to compute manufacturing costs.

3

The gadget trimming department of the Alpha Furniture Manufacturing Company operates eight hours per day, twenty-five days in each month, and employs three men who are paid \$1.25 per hour. Fixed charges of the department are \$169.00 per month; a maintenance charge of 75.60 per month is made against the department; supplies used cost \$1.40 per productive hour at the average output per hour. Certain miscellaneous expenses consist of fixed expenses of \$24.00 per month and variable expenses of 41 cents per productive hour. Apportioned expenses are charged to the department at a rate of 9 4/5 cents per productive hour, and other service charges amount to \$72.72 per month.

- (a) Prepare a budget to show the standard monthly cost of operating the department on a full time basis of production. Also compute the standard cost per productive hour on the basis of this budget.
- (b) Construct a budget to show the standard monthly cost of operating the department on a basis of 75% of possible production. Arrange your budget to show the cost arising from idleness separately from that of productivity, as well as the total cost of each item. Also compute the standard cost per productive hour on the basis of this budget, with this cost analyzed to show the cost of idleness as well as productivity.

4

The Garma Manufacturing Company operates a cost system through a Factory Ledger which is interlocked with the General Ledger in the Accounting system. The Factory Ledger is controlled through a "Factory Ledger Account" in the General Ledger. On July 1, 1920, the following balances existed in the Factory Ledger.

FACTORY LEDGER

| | |
|--|-----------|
| Production Orders (Dr. Balance) | \$ 14,000 |
| Cost of Manufactured Product (Dr. Balance) | 6,000 |
| Stores (Dr. Balance) | 9,000 |
| General Ledger (Cr. Balance) | 29,600 |

During the month the following transactions occurred:

SOMETHING ABOUT STATISTICS

Audited Vouchers:

| | | |
|---|----------|---------|
| Heat, Light and Power | \$ 3,600 | |
| Raw Material Purchases | 140,400 | |
| Labor, Direct | \$50,500 | |
| Indirect | 17,200 | |
| | <hr/> | 67,700 |
| Superintendence | 3,400 | |
| Repairs to Plant | 2,000 | |
| Factory Supplies (direct purchases) | 700 | |
| | <hr/> | 217,800 |

Fixed Charges:

| | | |
|--------------------|-------|-------|
| Taxes | 400 | |
| Insurance | 180 | |
| Depreciation | 3,400 | |
| | <hr/> | 3,980 |

Other Transactions:

| | |
|---|---------|
| Materials charged to Production Orders | 140,000 |
| Manufacturing Expense Charged to Production Orders | 30,000 |
| Cost of Product Manufactured | 229,500 |
| Cost of Manufactured Product Sold | 212,000 |
| Sales | 265,000 |

Cash Disbursements:

| | |
|--------------------------------|---------|
| Paid on Audited Vouchers | 166,500 |
|--------------------------------|---------|

- (a) Prepare journal entries to place the above transactions on the General and Factory Ledgers as required.
- (b) Prepare a Trial Balance of the Factory Ledger after giving effect to these transactions.

2ND YEAR—INDUSTRIAL ORGANIZATION

1

What factors should be considered when selecting a location for a manufacturing plant? Briefly discuss each one.

2

Describe three methods of distributing indirect expense.

3

Point out the advantages and disadvantages of "guaranteed prices."

4

Describe the "Rowan Plan" of wage payment, and show by means of a diagram how wages and costs vary with the rate of performance.

5

What is meant by "Welfare Work" applied to industry, and give your impressions of its effectiveness in stimulating morale.

6

Distinguish between the "Functional" and "Divisional" types of organization. Contrast the duties of shop foremen under the two systems.

7

Discuss the main factors involved in Scientific Purchasing, and enumerate the essentials of a purchasing contract.

Manufacturing Industries in Canada

(From a report prepared by the Dominion Bureau of Statistics)

THE downward trend in manufacturing activity begun in the fall of 1929 continued with increasing force in 1931. The output of manufactured products was valued at \$2,698,461,862, a decrease of \$730,508,766 or 21.3 per cent as compared with 1930 and a decrease of \$1,330,909,478 or 33 per cent as compared with 1929. Employment also declined during the past few years. The number of persons engaged in manufacturing dropped from 694,434 in 1929 to 644,439 in 1930 with an even sharper decline in 1931 to 557,426. Salaries and wages paid and value added by manufacture registered sharp declines from the record attained in 1929 as the following table shows.

| | % decrease 1930 compar'd with 1929 | % decrease 1931 compar'd with 1930 | % decrease 1931 compar'd with 1929 |
|-------------------------------|--|--|--|
| Employees | — 7.2 | —13.5 | —19.7 |
| Salaries and wages paid | — 9.5 | —15.2 | —23.2 |
| Gross value of products | —14.9 | —21.3 | —33.0 |
| Value added by manufacture . | —11.8 | —16.3 | —26.2 |

The large decrease in the number of employees in 1931 is not, however, entirely due to the decline in manufacturing production. The decrease is in part due to the change in method of computing the average annual employment of wage-earners. Between 1925 and 1930 the average was obtained by summing the averages of individual plants, based on the number of months in actual operation and not by dividing by 12 the sum of the monthly employment figures. For example, if a plant operated only during three months of the year with an employment of 100 persons the first month, 125 the second month and 75 the third month, its average annual employment was taken as 100 ($300 \div 3$); the same as that of another plant which operated the whole year with an average employment of 100 persons per month. In 1931, however, a change was made to the old method, whereby the aggregate of the monthly figures is divided by 12. This method gives the man year that each plant operates. The change in method therefore, affects the average annual employment as well as the average wages paid in seasonal industries, such as fruit and vegetable canning, fish canning, sawmills, etc.

Provinces where seasonal industries predominate, therefore, show a proportionately greater decrease in the number of employees in 1931 as compared with the decrease in the salaries and wages paid, while industries that operate throughout the entire year are not affected by this change.

All groups reported decreases in the number of employees, salaries and wages paid and the gross value of production. Of the major industrial groups, the textile industries suffered the least from the depressed business conditions prevailing in 1931. Compared with the previous year, the number of employees declined only by 3.8 per cent, the salaries and wages paid 5.5 per cent and the gross value of products 12.3 per cent. The "iron" and "wood and paper" groups, however, reported the greatest declines in employment, salaries and wages paid and gross value of production as the following table shows.

MANUFACTURING INDUSTRIES OF CANADA

| | Percentage Increase or Decrease in Number of Employees | Salaries & wages paid | Gross Value of Products |
|-----------------------------------|--|--------------------------|----------------------------|
| CANADA | -13.5 | -15.2 | -21.3 |
| Prince Edward Island | -43.1 | 2.7 | -2.8 |
| Nova Scotia | -23.3 | -15.2 | -17.6 |
| New Brunswick | -28.8 | -15.3 | -13.1 |
| Quebec | -11.7 | -13.6 | -16.9 |
| Ontario | -12.3 | -15.4 | -23.4 |
| Manitoba | -8.7 | -9.5 | -16.8 |
| Saskatchewan | -16.4 | -18.2 | -28.9 |
| Alberta | -16.3 | -16.8 | -27.5 |
| British Columbia and Yukon ... | -19.7 | -22.3 | -27.1 |
| ALL GROUPS | -13.5 | -15.2 | -21.3 |
| Vegetable products | -7.7 | -7.4 | -20.4 |
| Animal products | -11.1 | -7.8 | -23.2 |
| Textiles and textile products ... | -3.8 | -5.5 | -12.3 |
| Wood and paper products | -22.3 | -19.5 | -23.9 |
| Iron and its products | -19.2 | -27.0 | -34.3 |
| Non-ferrous metal products ... | -11.2 | -11.8 | -15.2 |
| Non-metallic mineral products .. | -16.6 | -17.8 | -16.4 |
| Chemicals and chemical products | -1.9 | -6 | -12.1 |
| Miscellaneous industries | -10.4 | -14.2 | -21.8 |
| Central electric stations | -4.7 | -3.6 | -2.9 |

Manufacturing establishments reporting in 1931 numbered 24,501. Of these, 10,140 were located in Ontario, 7,505 in Quebec, 1,636 in British Columbia and Yukon, 1,449 in Nova Scotia, 955 in Manitoba, 886 in Alberta, 872 in New Brunswick, 768 in Saskatchewan, and 290 in Prince Edward Island. These plants represented a capital investment of \$4,961,312,408 in fixed and working capital; they furnished employment to 557,426 persons who were paid \$624,545,561 in salaries and wages. They also produced goods with a selling value at the factory of \$2,698,461,862 and spent \$1,223,880,011 for materials, leaving the value added by manufacture at \$1,474,581,851. It should be remembered that the value added by manufacture does not represent the manufacturers' profits. The value added by manufacture is obtained by subtracting the cost of the materials from the value of the products. This difference represents the value added to the raw materials by labour. It is this difference which the employer of labour uses to pay for the labour itself, the overhead expenses, profits, etc. Compared with the previous year, there was a decline of \$287,404,875 in the value added by manufacture.

The manufacturing industries of Canada are concentrated largely in the provinces of Ontario and Quebec, although the Western Provinces are beginning to assume increasing importance. Ontario is the dominant manufacturing province in Canada. In 1931, with only 41.4 per cent of the total number of establishments, it employed 46.1 per cent of the capital, 48.4 per cent of the number of employees and produced 48.6 per cent of the entire output.

As mentioned above, the number of persons engaged in the manufacturing industries of Canada in 1931 totalled 557,426. Of these, 99,798 were salaried employees who were paid \$186,810,794 in salaries and 457,628 wage-earners who were paid \$437,734, 767 in wages. In 1931, the average salary was \$1,872 and the average wage \$957. Compared with the previous year, there was a decrease of \$110 in the average salary and \$44 in the average wage. In addition to the payments of salaries and wages, the clothing industries paid \$2,042,156

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to contractors, the fish canners \$421,452 to 2,954 inside piece-workers who do not form part of the regular working force, while \$159,194 was paid to outside piece-workers the majority of whom were employed in the textile group of industries.

From statistics of the forty leading industries, it may be seen that the pulp and paper industry again exceeded all others in gross value of production. Other leading industries in order of their importance were.

| Rank in 1931 | | Rank in 1930 |
|--------------|---------------------------------|--------------|
| 2 | Central electric stations | 4 |
| 3 | Slaughtering and meatpacking | 2 |
| 4 | Non-ferrous metal smelting | 10 |
| 5 | Flour and feed mills | 3 |
| 6 | Butter and cheese | 6 |
| 7 | Electric apparatus and supplies | 8 |
| 8 | Petroleum products | 11 |
| 9 | Tobacco, cigars and cigarettes | 12 |
| 10 | Railway rolling stock | 7 |

In salaries and wages paid, which is probably a better index of the importance of an industry, the order of the ten leading industries is materially changed. Pulp and paper still comes first, followed by—

| | | Rank according to Gross Value of Products |
|----|-----------------------------------|--|
| 2 | Railway rolling stock | 10 |
| 3 | Printing and publishing | 11 |
| 4 | Central electric stations | 2 |
| 5 | Electrical apparatus and supplies | 7 |
| 6 | Castings and forgings | 17 |
| 7 | Bread and Other Bakery Products | 12 |
| 8 | Sawmills | 13 |
| 9 | Clothing, women's factory | 15 |
| 10 | Printing and bookbinding | 29 |

Summary Statistics of Manufacturers, 1923-1931

| Year | No. of Establishments | Capital \$ | Employees No. |
|------|-----------------------------|----------------------------|----------------------------------|
| 1923 | 22,642 | 3,380,322,950 | 525,267 |
| 1924 | 22,178 | 3,538,813,460 | 508,503 |
| 1925 | 22,331 | 3,808,309,981 | 544,225 |
| 1926 | 22,708 | 3,981,569,590 | 581,539 |
| 1927 | 22,936 | 4,337,631,558 | 618,933 |
| 1928 | 23,379 | 4,780,296,049 | 658,023 |
| 1929 | 23,597 | 5,083,014,754 | 694,434 |
| 1930 | 24,020 | 5,203,316,760 | 644,439 |
| 1931 | 24,501 | 4,961,312,408 | 557,426 |
| | Salaries and wages \$ | Cost of Materials \$ | Gross Value of Products \$ |
| | 571,470,028 | 1,470,140,139 | 2,781,165,514 |
| | 559,884,045 | 1,438,409,681 | 2,695,053,582 |
| | 596,015,171 | 1,587,665,408 | 2,948,545,315 |
| | 653,850,933 | 1,728,624,192 | 3,221,269,231 |
| | 693,932,228 | 1,758,789,334 | 3,394,713,270 |
| | 755,199,372 | 1,919,438,703 | 3,738,484,728 |
| | 813,049,842 | 2,032,020,975 | 4,029,371,340 |
| | 736,092,766 | 1,666,983,902 | 3,428,970,628 |
| | 624,545,561 | 1,223,880,011 | 2,698,461,862 |

Costing the Distributive Processes

(From the Bulletin of the International Management Institute)

IN the February Bulletin for 1932 we called attention to a scheme for planning retailing activities in a department store. In the March Bulletin of this year we listed the recent publications of the Bureau of Foreign and Domestic Commerce at Washington on various aspects of Domestic distribution. In the February number of the Bulletin of the Taylor Society for the current year Dr. Frank M. Surface of the staff of the Bureau shows how, as the result of the studies, the Bureau is gradually evolving definite principles for the compilation of distributive costs and their allocation to specific commodities¹.

The connection between these different tendencies is important. It is increasingly realised by manufacturers and traders that the existing business crisis is in large measure due to a failure in organization. There are other factors which have contributed to it, currency and financial disorders, the destruction of export business by panic tariffs, debts and the uncertainty which they have introduced into business relations, the catastrophic decline in prices. But money is by definition a "medium of exchange". And all these phenomena of a monetary character are fundamentally symptoms of the real disease, rather than the complaint itself. No medium of exchange can work properly as long as the realities which are represented by that medium are out of balance. Prices are a reflection of supply of and demand for goods and services: debts are a record of past goods and services supplied; tariffs claim to be a measure designed to keep a national economy in balance by preventing an influx of goods which are not required.

That is to say if the supply of goods of any one kind is in excess of world requirements at the price which the world is prepared to pay for the services of producing and distributing them there will follow inevitably a decline in prices. If goods and services rendered in the past have been dissipated in destructive activities or ill-conceived constructive equipment the obligations which have thus been created will throw the normal exchange of goods and services out of gear in the present. Since the world is at present organized on a national basis and power depends on satisfying interests whose views are short, such a situation inevitably creates a demand for protective tariffs.

Nor is this lack of balance, this mal-organization in the realities of economic life, the production and exchange of goods and services, surprising. For a full century the world has devoted all the resources of an amazing scientific and technological development to im-organization has been constantly enlarged. The materials, the processes, the costs of productive activities have been analyzed to the last point of refinement. The scientific, the engineering, attitude has been applied not only to materials and processes, but in the form of scientific management and rationalization, to the organization and administration of individual producing enterprises and to the relations

¹ "Marketing Costs — A Method of Allocating to Individual Commodities", by Frank M. Surface. Bulletin of the Taylor Society, Vol. XVIII, No. 1, February 1933, page 2.

proving the means of production. The scale of research and of or-

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between the different parts of each nation's productive equipment viewed as a whole. Much still remains to be done. But the world's productive capacity has never been higher.

On the other hand, with noteworthy exceptions, this immense advance in technological control has not been accomplished by any similar development in the processes of distribution and of financing. Speaking generally the world's distributive and financial mechanism is much what it was in the period which preceded the introduction of power-driven machinery. While improvements in intercommunication have resulted in a great specialization of the various activities involved, the relations between the numerous independent traders engaged in these activities have remained entirely pecuniary. They have been unaffected by the technological attitude. As a consequence they have become increasingly ill-adapted either to distribute the mounting production of a machine economy or to keep producers informed as to the real character of effective demand.

One of the first and essential steps in the correction of this situation is the adoption by distributors themselves of the same scientific techniques and attitude towards their work which have long been a common-place among progressive producers. The substitution of planning for guesswork in the actual conduct of distributive undertakings is a necessary preliminary to the substitution of planning for "horse-trading" in the relations between producers and consumers. Similarly the accurate and scientific allocation of distributive costs to commodities should go a long way towards clearing up many of the failures to collaborate effectively which arise between the two main partners in the economic process.

This is the larger significance of the work of Dr. Surface and his collaborators at the Bureau of Foreign and Domestic Commerce. But this method of approach has the added advantage that, as in the case of all sound scientific work, it yields an interim dividend to those individual traders who make use of it. As the Bulletin of the Taylor Society correctly points out, the article "with its illustrative charts should serve as a guide to distributors of a wide variety of products in setting up their own system of compiling and comparing cost factors and thereby working out improved methods of distribution. While the article is based on wholesalers' costs, the same principles can be applied in analyzing manufacturers' and retailers' costs. Those who have followed this plan have seen results in an improved relative position in the competitive market."

The plan put forward by Dr. Surface may be summarised briefly as follows. The marketing costs of a typical wholesaler may be broken down into a series of functional classifications. Each of these functional classifications should be allocated to commodities on a separate basis. The scheme suggested is:

| Functional classification of Marketing Costs. | Costs Allocated to Commodities on |
|--|--------------------------------------|
| Maintenance | |
| Investment | Average value of stock on hand |
| Storage | Square feet of floor space occupied |
| Movement | |
| Physical handling | Number of standard units |
| Order routine | Number of invoice lines |
| Contact | |
| Reimbursement | Per cent of total sales |
| Promotion | Per cent of gross margin |

COSTING THE DISTRIBUTIVE PROCESSES

The total operating expenses of the wholesale undertaking are then allocated to the six functional groupings. In respect of many items there is no problem: they can be assigned direct to the proper functional group. Where division of the normal expense items is necessary, time studies or conferences with officials are usually sufficient to determine an equitable assignment. In the case considered 89.91% of the total expense of the undertaking could be directly allocated to the functional groups. The remaining 10.09% which could not be distributed directly was assigned to the respective groups in the same ratio as the total expense directly distributed.

Once the operating expenses have thus been distributed in total into the different functional groups, it is possible to distribute them to the various commodities, each category of expense being allocated to each commodity on the basis shown in the table. Thus the distributor may arrive at the total annual cost of handling a particular item and relate it to the total sales of that item and the gross margin. In the case considered one item representing 12.24% of the sales was actually selling at a small nett loss. A second item represented a nett profit of 4.27% on the total sales of the item.

As the article points out, such a cost analysis makes it possible to trace back to the particular expenses which run up the total costs of handling an article which shows a nett loss or an insufficient margin of nett profit. This often leads to the discovery of methods of making savings which will yield a satisfactory margin of nett profit. In any event, notice is served on the management that all is not well with particular commodities on their list. Once this is recognized it is usually possible to take steps to correct the position at least to some extent.

Similar principles with slight modification of details can be used in allocating costs to customers rather than to commodities. And some very important deductions can be made from such studies. The explanatory details and tables in Dr. Surface's article have been omitted. It is hoped that all members of the International Management Institute will make a point of studying the original article. By kind permission of the author and of the Taylor Society rotaprinted copies of this article will be distributed to members of the Institute. As he rightly insists, the process of distribution costing "is not nearly so difficult as many firms have supposed. While it requires at the start a number of factors not ordinarily compiled, these are all readily obtainable. Once the system is set up, the compilation of the costs becomes largely routine which can be handled for the average firm with very little added expense. It is a type of information which the distributor of the future is going to find absolutely necessary, and those who are making use of it today are finding themselves in an advantageous position compared with their competitors."

A man approached a stranger upon the street, stopped him and said: "If a train left Chicago for New York and averaged 59 miles an hour, and another train left New York for Chicago and averaged 64 miles an hour, and they passed, how old am I?"

The gentleman looked at his questioner and immediately replied: "Why, you're 38."

"That's right, but how in the world did you ever figure that out?"

"Well, you see, I have a cousin that's half crazy and he's 19."

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ONTARIO CHAPTER JOINS IN GOLF GAMES

Thirty-two members and friends turned out to the golf game held on May 19th at Hamilton Golf and Country Club, Ancaster. Hamilton Chapter provided half this number, Toronto twelve, and Central Ontario Chapter four. The Ancaster course is one of the finest in Canada, and was placed at the disposal of our members through the courtesy of Stanley LeBrocq and G. E. F. Smith, C.A., of Hamilton Chapter, who are also members of the Hamilton Golf and Country Club. The weather was excellent, and the course in fine shape, at least until some of the Toronto players commenced operations. A notable feature of the event was the complete absence of competitive scoring, and of prizes. Undoubtedly some of the scores will forever remain a dark secret. The day concluded with an excellent dinner. It was entirely informal, especially by dinner time.

Another golf game will be held at the Lakeview Golf and Country Club, on the Toronto-Hamilton Highway near Port Credit, on Monday, June 26th, commencing at 2 p.m. Notice is being sent to members of Toronto, Hamilton and Central Ontario Chapters.

FIRST ANNUAL GOLF TOURNAMENT OF MONTREAL CHAPTER

On Saturday, June 3rd, the members of the Montreal Chapter, Canadian Society of Cost Accountants and Industrial Engineers, journeyed to St. Jerome, where they were guests of Mr. Jean Paul Rolland at the St. Jerome Golf Club. Tennis and golf were the order of the day.

In the morning the early arrivals went around the Course and located the various pitfalls and brooks, etc. After lunch the golf tournament proper commenced, with members of the Society and their friends taking part. Mr. Lorenzo Belanger had presented the Belanger Cup for annual competition and this was won for the first year by Mr. G. I. MacKenzie. The Rolland Trophy, donated by Mr. Jean Paul Rolland, for the second best score was won by Mr. L. N. Buzzell. Messrs. Campbell, Roy and Gagnon was special prizes for various events.

A team of picked tennis players from the General Accountants' Association waged war with one from the Cost Accountants. After the uproar of battle had subsided it was found that the Cost Accountants were the victors by a small margin.

Dinner was served at the club, after the last hole had been played to the entire satisfaction of all. At dinner the appreciation of the Society to our host, and to Mr. Belanger for his kindness, was expressed, the good health of our champions was toasted, and sundry prizes were distributed. In the evening the party enjoyed a dance at the club. The Belanger Cup was presented by Madame Belanger and Madame Jean Paul Rolland presented the Rolland Trophy.

The party left for Montreal tired but happy, and arrived home at an early and respectable hour.

CHAPTER NOTES

TORONTO

Reported by W. A. McKague, General Secretary

Directors of Toronto Chapter held a meeting on May 19th, to get arrangements under way for the coming season. Messrs. Dean, Dingle and Shiach are being asked to take on the job of program and speakers, while the task of attending to publicity for Toronto Chapter was delegated to the writer. The entire executive of the Chapter will constitute a committee on membership and attendance.

The question of evening vs. dinner meetings was again discussed. A majority of those present were in favour of continuing the dinner meetings. It was felt, however, that the cost of the dinners should be kept as low as possible, and part of the Chapter's revenue for the year may be used to reduce the dinner charge to members. Those coming after the dinner will be equally welcome, as usual. In place of having every meeting on a Monday evening, this year the day of the day of the week will probably be varied. It was decided to issue printed notices of the meetings, as in the past season. A record of attendance, through badges and guest slips, will be maintained as in the past season, but the printed "score sheet" will probably not be issued. It was suggested that each member of the executive be a team captain, and that the attendance standing by teams be shown in the notices of meetings.

THE TREND OF PRODUCTION COSTS

Commodity prices as measured by the Dominion Bureau of Statistics index number which is based on the year 1926, advanced from 64.4 in March to 65.4 in April. The following is a comparison by main groups:

| | April 1932 | March 1933 | April 1933 |
|---|---------------|---------------|---------------|
| Foods, beverages and tobacco | 62.4 | 59.8 | 64.1 |
| Other consumers' goods | 77.3 | 76.0 | 74.8 |
| All consumers' goods | 71.3 | 69.5 | 70.5 |
| Producers' equipment | 90.7 | 87.0 | 87.2 |
| Building and construction materials.... | 78.7 | 75.1 | 74.8 |
| Manufacturers' materials | 59.0 | 53.3 | 54.0 |
| All producers' materials | 62.6 | 57.2 | 57.8 |
| All producers' goods | 65.4 | 60.2 | 60.7 |
| All commodities | 68.2 | 64.4 | 65.4 |

The principal advances in April were in the following: Domestic fresh fruits, grains, sugar, hides and skins, live stock, meats and poultry, fats. The principal declines were in the following: Tobacco, eggs, newsprint, coal.

Commodity prices as measured by the Dominion Bureau of Statistics index number which is based on the year 1926, advanced from 63.6 in February to 64.4 in March. The following is a comparison by main groups:

| | March 1932 | February 1933 | March 1933 |
|------------------------------------|---------------|------------------|---------------|
| Foods, beverages and tobacco | 63.8 | 58.3 | 59.8 |

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| | | | |
|--|------|------|------|
| Other consumers' goods | 78.0 | 76.1 | 76.0 |
| All consumers' goods | 72.9 | 69.0 | 69.5 |
| Producers' equipment | 90.8 | 87.2 | 87.0 |
| Building and construction materials | 78.9 | 74.7 | 75.1 |
| Manufacturers' materials | 59.6 | 51.6 | 53.3 |
| All producers' materials | 63.1 | 55.8 | 57.2 |
| All producers' goods | 65.9 | 58.9 | 60.2 |
| All commodities | 69.1 | 63.6 | 64.4 |

The principal advances in March were in the following: Hides and skins, live stock, meats and poultry, milk and its products, fats, cotton, silver, tin, dyeing and tanning materials. The principal declines were in the following: eggs, coal, tar products.

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